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EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,656

Applicant(s)

FOUQUET ET AL.

Examiner

Thong H. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Claims 1-28 are pending.

Response to Arguments

2. Applicant's arguments filed 7/25/05 have been fully considered but they are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,5,26 are rejected under 35 U.S.C. 102(e) as anticipated by Mayes [2002/ 0075862 A1].

3. As per claim 1, Mayes discloses a network for communicating a message, the network comprising topographic network devices and communication links interconnecting the topographic network devices [Mayes, the switching nodes are interconnected, 0024; topologically flat, 0036], the topographic network devices each having a physical location represented by a topographic coordinate set [Mayes, physical located, 0029] and having a network address that includes the topographic coordinate set [Mayes, module's address,0041;node's address,0045]; a set of links,0055].

4. As per claim 26 contains the similar limitations set for in claim 1. Therefore claim 26 is rejected for the same rationale set forth claim 1.

5. As per claim 5, Mayes discloses ones of the topographic network devices capable of originating the message for transmittal through the network to another of the topographic network devices as a destination network device [Mayes, source and destination, 0024] each include a topographic addressing engine that operates to include the topographic coordinate set of the destination network device in the message [Mayes, computing the coordinates of said second node (or destination node) by performing modulo arithmetic to the coordinates of said first node, 0013].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-25, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayes [2002/ 0075862 A1] in view of Huang [5,841,775].

6. As per claim 6, Mayes discloses the message includes the topographic coordinate set of a destination network device as a destination coordinate set, the destination network device being one of the topographic network devices [Mayes, an array coordinate, 0045]; and a one of the topographic network devices as an

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intermediate network device (i.e.: router), upon receiving the message, operates to route the message to another of the topographic network devices [Mayes, routing table, 0055],

However Mayes does not explicitly detail

“the other of the network devices being physically closer to the destination network device than the intermediate topographic network device”.

In the same endeavor, Huang discloses the router provides the OSPF or closest path routing [Huang, col 7 lines 27-39]

Therefore it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the shortest path as taught by Huang into the Mayes apparatus in order to utilize the routing process. Doing so would provide a shortest path to the destination device.

As per claim 7, Mayes-Huang disclose the network addresses of ones of the topographic network devices having substantially coincident physical locations each include an additional numeric data field [Mayes, set of integers, 0064].

7. As per claim 8, Mayes-Huang disclose additional network devices and additional communication links, the additional communication links connecting the additional network devices to ones of the topographic network devices, the additional network devices having conventional network addresses lacking topographic coordinate sets [Mayes, More routers can be added to the switch fabric, 0040].

8. As per claim 9, Mayes-Huang disclose the other of the topographic network devices is associated with the destination network device by being directly connected thereto [Huang, directly handled by router, col 12 lines 58-67;col 14 lines 43-63].

9. As per claim 10, Mayes-Huang disclose routing the message from one of the topographic network devices located in a first one of the regions to another of the topographic network devices located in a second one of the regions via the regional network device of the first one of the regions and the regional network device of the second one of the regions [Mayes, router, 0025].

10. As per claim 11, Mayes discloses the destination network address includes a domain name; and the other of the topographic network devices is associated with the destination network device by being associated with the domain name included in the destination network address [Huang, Domain routing, col 9 lines 3-12].

11. As per claim 12, Mayes discloses the other of the topographic network devices operates to receive the message and to provide a new destination coordinate set for the message [Mayes, new module, 0031], the new destination coordinate set being the topographic coordinate set of an output one of the topographic network devices to which the destination network device is directly connected [Huang, directly handled by router, col 12 lines 58-67;col 14 lines 43-63].

12. As per claim 13, Mayes discloses the message includes a destination coordinate set, the destination coordinate set being the topographic coordinate set of a destination network device, the destination network device being one of the topographic network devices as inherent feature of routing table;

the network includes regions, each of the regions comprising at least one regional network device, the regional network device being one of the topographic network devices, the regional network devices of the regions being interconnected by high-capacity communication links, the high-capacity communication links being high-capacity ones of the communication links [Mayes, higher capacity, 0027];

the topographic network devices in each one of the regions each include additional topographic information indicating the topographic coordinate set of the regional network device of the one of the regions and a topographic extent of at least some of the regions [Huang, additional routing, col 8 lines 35-48]; and

a one of the topographic network devices, upon receiving the message, operates in response to the destination coordinate set and the additional topographic information to route the message to the regional network device when the additional topographic information indicates that the destination network device is located in another of the regions [Huang, additional level of mapping interconnect and row of router, provided by the destination based routing of TCP/IP, col 8 line 57-col 9 line 2].

13. As per claim 14, Mayes discloses the regional network device operates in response to the destination coordinate set and the additional topographic information stored therein to route the message to the regional network device of the region in which the destination network device is located [Mayes, router, 0025].

14. As per claim 15, Mayes-Huang disclose A topographic network device for operation in a network including topographic devices in which each of the topographic network devices has a physical location represented by a topographic coordinate set, in which each of the topographic network devices additionally has a network address that includes the topographic coordinate set, and in which a message configured for transmission through the network includes a destination coordinate set, the destination network set being the topographic coordinate set of a destination network device, the destination network device being one of the topographic network devices, the topographic network device comprising:

channels each configured for connection via a communication link to another of the topographic network devices, the channels including a first channel via which the message is received [Mayes, channels, 0076];

a coordinate store for storing connected device coordinate sets, the connected device coordinate sets being the topographic coordinate sets of the topographic network devices to which the channels are directly connected [Huang, directly handled by router, col 12 lines 58-67; col 14 lines 43-63]; and

a topographic processor that operates in response to the connected device coordinate sets stored in the coordinate store and the destination coordinate set of the message to identify a second channel to which to forward the message, the second channel being another of the channels [Mayes, forward information, 0055].

As per claim 16, Mayes-Huang disclose the second channel is the one of the channels connected to another of the topographic network devices that is physically closer to the destination network device than the network device [Huang, closest path routing, col 7 lines 27-39]

15. As per claim 17, Mayes-Huang disclose the coordinate store is configured to store, as connected device coordinate sets, topographic coordinate sets received from ones of the topographic network devices directly connected to the channels of the network device [Huang, directly handled by router, col 12 lines 58-67; col 14 lines 43-63].

16. As per claim 18, Mayes-Huang disclose the coordinate store is additionally configured to store at least one of (a) device-type information [Mayes, type of device, 0024] and (b) additional topographic information for the ones of the topographic network devices directly connected to the network device [Huang, directly handled by router, col 12 lines 58-67; col 14 lines 43-63]; and the topographic processor additionally operates

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in response to at least one of the device-type information and the additional topographic information to identify the second channel [Mayes, identifies the connection, 0028].

17. As per claim 19, Mayes-Huang disclose the coordinate store is additionally configured to store additional topographic information relating to the network; and the topographic processor operates in response to the additional topographic information in lieu of the destination coordinate set of the message to identify the second channel [Mayes, added or removed and configuration, 0107].

18. As per claim 20, Mayes-Huang disclose the topographic processor operates in response to the additional topographic information to identify, as the second channel, a one of the channels connected at least indirectly (i.e.: redundancy) to one of the communication links at least one of (a) having a higher transmission capacity [Mayes, higher capacity, 0027], and (b) carrying less pre-existing network traffic [Mayes, less capacity, claim 33, page 8]

19. As per claim 21, Mayes-Huang disclose the network includes regions, each of the regions comprising at least one regional network device, the regional network device being one of the topographic network devices, the regional network devices of the regions being interconnected by high-capacity communication links, the high-capacity communication links being high-capacity ones of the communication links [Mayes, higher capacity, 0027]; and the topographic processor operates in response to

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the additional topographic information to identify, as the second channel, a one of the channels connected to the regional network device of the region in which the topographic network device is located [Mayes, identifies the connection, 0028].

20. As per claim 22, Mayes-Huang disclose additional network devices and additional communication links, the additional communication links connecting the additional network devices to ones of the topographic network devices, the additional network devices having conventional network addresses lacking topographic coordinate sets, the additional network devices including a destination network device;

the message includes, instead of the destination coordinate set, a destination network address identifying the destination network device, the destination network address lacking a topographic coordinate set;

the topographic network device additionally comprises a topographic translator that operates on receipt of the message and in response to the destination network address to provide the topographic coordinate set of another of the topographic network devices as the destination coordinate set for the message, and the topographic processor operates in response to the destination coordinate set provided by the topographic translator.

21. As per claim 23, Mayes-Huang disclose a packet processing engine [Mayes, central controller, 0033] that operates to inhibit operation of the topographic translator

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(i.e.: dynamic reconfiguration) when it detects a destination coordinate set extant in the received message [Mayes, 0031].

22. As per claim 24, Mayes-Huang disclose a packet processing engine that operates to detect a destination coordinate set in the message and, when it detects the destination coordinate set, to determine whether the destination coordinate set is equal to the topographic coordinate set of the topographic network device [Huang, equal, col 5 lines 40-54]; and

a conventional address processor that, when the packet processing engine determines that the destination coordinate set is equal to the topographic coordinate set of the topographic network device, operates in response to the destination network address to identify the second channel [Mayes, identifies the connection, 0028].

23. As per claim 25, Mayes-Huang disclose a packet processing engine that operates to insert the topographic coordinate set of the topographic network device into the message as a reply-to coordinate set [Huang, additional routing, col 8 lines 35-48; response request, col 11 lines 12-20].

24. As per claims 27-28 contain the similar limitations set for in claims 9,24. Therefore claims 27-28 are rejected for the same rationale set forth claims 9,24.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayes [2002/ 0075862 A1] in view of Wallner [6,703,947 B1].

25. As per claim 2, Mayes discloses a network of intermediate switching nodes. However Mayes does not explicitly detail "a global positioning system receiver at least temporarily connected to ones of the topographic network devices to supply the topographic coordinate set thereto".

Wallner discloses a network of multi switching nodes such as Internet connected to a GPS to transmit a topographic element using a coordinate system [Wallner, Fig 4, col 7 lines 40-45].

Therefore it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the GPS transmits and receives the topographic element using a coordinates system as taught by Wallner into the Mayes apparatus in order to utilize the array coordinates in a topological network nodes. Doing so would enhanced interconnectivity of the interconnecting network via GPS and Internet.

26. As per claims 3,4 Mayes-Wallner disclose each of the topographic network devices is connected to at least one other of the topographic network devices and

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includes means for transmitting/receiving its topographic coordinate set to the at least one other of the topographic network devices [Wallner, a coordinate system Fig 4, col 7 lines 40-45].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thong Vu*, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Andrew Caldwell*, can be reached at (571) 272-3868. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
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A handwritten signature in black ink, appearing to read 'Thong', with a long horizontal stroke extending to the right.